

WHAT IS CLAIMED IS:

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1. An apparatus for discharging a sheet, said apparatus comprising:
a tray on which printed sheet is stacked;
a holder supporting said printed sheet above said tray; and
a moving means for horizontally moving said holder in a direction perpendicular to a sheet discharging direction.

2. The apparatus as claimed in claim 1, further comprised of said moving means comprising:
a rack reciprocating perpendicular to the sheet discharging direction; and
a driving means for driving said rack,
said holder moving above the tray in association with a movement of said rack.

3. The apparatus as claimed in claim 2, further comprised of said driving means comprising:
a motor; and
a pinion connected to a shaft of said motor and engaged with said rack, said pinion receiving a motion transferred from said motor and transferring said motion to said rack.

4. The apparatus as claimed in claim 2, further comprised of said driving means

comprising a carrier including an ink cartridge, said carrier reciprocating in the direction perpendicular to the sheet discharging direction.

5. The apparatus as claimed in claim 3, further comprising a lever having a first end and a second end, said first end connected to said holder, said second end connected to said rack, said lever pivoting in association with the movement of said rack.

6. The apparatus as claimed in claim 5, further comprised of:
said holder having a slot, said slot being of an arc shape for guiding a movement of said lever; and
said lever having a first gear and a protrusion, said first gear mounted at said second end and engaged with the rack, said protrusion protruding from said first end to be inserted into said slot.

7. The apparatus as claimed in claim 6, further comprising means for elastically biasing said lever to pivot in favor of the sheet discharging direction, said biasing means interposed between said holder and said lever.

8. The apparatus as claimed in claim 7, wherein said biasing means is a spring.

9. An apparatus for discharging a sheet, said apparatus comprising:
a tray on which a printed sheet is stacked;

3 a pair of holders including a first holder and a second holder, said first and second holders
4 mounted respectively on both sides of said tray, said pair of holders holding said printed sheet above
5 said tray; and

6 a moving means for horizontally moving said first and second holders in a direction
7 perpendicular to a sheet discharging direction.

1 10. The apparatus as claimed in claim 9, further comprised of:

2 said moving means further comprising a rack reciprocating perpendicular to the sheet
3 discharging direction and a driving means for driving said rack; and

4 said first and second holders moving toward and away from each other in association with
5 a movement of said rack.

1 11. The apparatus as claimed in claim 10, further comprised of said driving means
2 comprising;

3 a motor; and

4 a pinion connected to a shaft of said motor and engaged with said rack, said pinion receiving
5 a motion transferred from said motor and transferring said motion to said rack.

1 12. The apparatus as claimed in claim 10, further comprised of said driving means
2 comprising a carrier including an ink cartridge, said carrier reciprocating in the direction
3 perpendicular to the sheet discharging direction.

1 13. The apparatus as claimed in claim 11, further comprising:

2 a first lever; and

3 a second lever, each of said first and said second levers having a first end and a second end,
4 each said first end connected to said first and said second holder respectively, each said second end
5 connected to said rack.

1 14. The apparatus as claimed in claim 13, further comprised of:

2 each of said first and said second holders having a slot, said slot being of an arc shape for
3 guiding a movement of said lever; and

4 each of said first and said second levers having a protrusion protruding from said first end
5 to be inserted into said slot.

1 15. The apparatus as claimed in claim 14, further comprising means for elastically biasing
2 said first and said second levers to pivot in favor of the sheet discharging direction, said biasing
3 means interposed between said first holder and said first lever and between said second holder and
4 second lever respectively.

1 16. The apparatus as claimed in claim 15, wherein said biasing means is a spring.

1 17. The apparatus as claimed in claim 16, further comprised of:

2 said first lever comprising a first gear mounted on the second end of said first lever and a
3 second gear engaged with said first gear and said rack; and

4 said second lever comprising a third gear, said third gear mounted on the second end of said
5 second lever and engaged with said rack,

6 so that said first lever pivots clockwise on a shaft of said first gear in association with the
7 movement of said rack and said second lever pivots counterclockwise on a shaft of said third gear
8 in association with the movement of said rack.

1 18. The apparatus as claimed in claim 17, further comprised of said rack having:

2 a first part having first gear teeth engaging with said second gear; and

3 a second part having second gear teeth engaging with said third gear,

4 a length of said first part is longer than a length of the second part, said second part
5 protruding in the paper discharging direction such that front ends of said first and second holders
6 correspond to each other.

1 19. The apparatus as claimed in claim 18, further comprising springs biasing said first
2 and said second levers to pivot in favor of the sheet discharging direction, said springs interposed
3 between said first holder and said first lever and between said second holder and second lever
4 respectively.

1 20. An apparatus for discharging a sheet of an ink-jet printer, said apparatus comprising:

2 a tray on which a printed sheet is stacked;

3 a pair of opposed and movable holders including a first holder and a second holder, each of
4 said first and second holders holding said printed sheet above said tray, said first and said second
5 holders mounted respectively on both sides of said tray;

6 moving means for moving said first and second holders according to a width of a printed
7 sheet in such a way that, to drop the printed sheet onto said tray, a distance between said first and
8 said second holders is wider than said width of the printed sheet and, to hold the printed sheet above
9 said tray, the distance between said first and second holders is narrower than the width of the printed
10 sheet; and

11 a pair of levers including a first lever and a second lever, each of said first and second levers
12 having a first end connected to said holder and a second end connected to said rack,

1 21. The apparatus as claimed in claim 20, wherein said holders within the ink-jet printer
2 and are not exposed to the outside of the ink-jet printer when the ink-jet printer is not operated.

1 22. The apparatus as claimed in claim 21, further comprised of:

2 each of said first and said second holders having a slot, said slot being of an arc shape for
3 guiding movements of said first and second levers;

4 said first lever comprising a first gear mounted on the second end of said first lever, a second
5 gear engaged with said first gear and said rack and a first protrusion protruding from the first end of
6 said first holder to be inserted into the slot of the first holder; and

7 said second lever comprising a third gear mounted on the second end of said second lever
8 and engaged with said rack, a second protrusion protruding from the first end of said first holder to
9 be inserted into the slot of the second holder,
10 so that said first lever pivots clockwise on a shaft of said first gear in association with the
11 movement of said rack and said second lever pivots counterclockwise on a shaft of said third gear
12 in association with the movement of said rack.

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